

CLAIMS

- 5 1. An antibody specifically reactive with an epitope which is exposed on a part of an aberrant conformer (PrP^{Sc}) of a prion protein after treatment of said conformer with a protease wherein said epitope is not or only partly exposed on a prion protein which has not been treated with a protease.
- 10 2. An antibody characterized by a higher affinity to an aberrant prion protein (PrP^{Sc}) than to a non-aberrant prion protein (PrP^C).
3. An antibody according to claim 2 wherein said PrP^{Sc} has been treated with a protease.
- 15 4. An antibody according to anyone of claims 1 to 3 wherein said protease comprises protease K.
5. An antibody according to anyone of claims 1 to 4 wherein said epitope comprises a peptide with an amino acid sequence QXXKXS.
- 20 6. An antibody according to anyone of claims 1 to 5 with a specific reactivity to overlapping 15-mer oligo-peptides derived from the human, ovine, murine as well as hamster PrP amino-acid-sequences that correspond to the bovine PrP amino acid sequence at about amino acid position 108-119.
- 25 7. An antibody according to claim 6 wherein said bovine PrP amino acid sequence comprises GQW NKPSKPKTN.
- 30 8. An antibody according to claim 7 comprising a V_H region encoded by a nucleic acid comprising at least a CDR3 having a nucleic acid sequence encoding the amino acid sequence AGDNDAEDY.

9. A hybridoma cell capable of producing a monoclonal antibody of claim 7 or 8.
- 5 10. Hybridoma cell 1E4 having the deposit accession number CNCM I-2906.
11. A method for determining the presence of a prion protein in a sample comprising using an antibody according to anyone of claims 1 to 8.
- 10 12. A method according to claim 11 for determining the presence of a prion protein in a biological sample via the detection of a complex between said protein and said antibody.
13. A diagnostic test kit for the determination of the presence of a prion protein in a biological sample comprising an antibody according to anyone of claims 1 to 8.
- 15 14. A method for obtaining an antibody according to anyone of claims 1 to 8 , comprising :
 - providing a set of antibody-producing cells by,
 - 20 testing said cells for the presence of an antibody specifically reactive with PrP^{Sc}.
 - testing the ability of said antibody to react with higher affinity with PrP^{Sc} than with PrP^C.
 - 25 selecting an antibody specifically reactive with protease-digested PrP^{Sc} comprising testing the ability of said antibody to react with higher affinity with protease-digested PrP^{Sc} material compared to non-digested PrP^{Sc} material
- 30 15. A method according to claim 14 further comprising selecting an antibody specifically reactive with PrP from multiple species

16. A method according to claim 15 further comprising testing said antibody for reactivity of said antibody with oligomerpeptides derived from the human, bovine, ovine, murine and hamster PrP.

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17. A method according to anyone of claims 14-16 further comprising selecting an antibody with an additional reactivity with a peptide with an amino acid sequence QXXKXS comprising measuring the reactivity of said antibody with oligomerpeptides derived from murine as well as hamster PrP amino acid sequence that correspond to
10 murine PrP amino acid sequence at about amino acid position 217-222 in a Pepscan analysis.